

REMARKS

The above Amendment and the following remarks are responsive to the Office Action dated November 23, 2004. The Applicant requests entry of this Amendment, favorable reconsideration of this case, and early issuance of a Notice of Allowance.

Status of the Claims

Upon entry of this Amendment, the Applicant have rewritten claims 1, 8, 14, 18, 20, and 25, and added claims 26-30. Thus, claims 1-30 are pending in the application. Claims 1, 8, 14, 20, and 25 are independent claims.

Response to the Rejection under 35 U.S.C. § 112, Second Paragraph

The Examiner rejected claim 18 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the Applicants regard as the invention. The Examiner indicates that the phrase “the tubular body” is repeated on line 1 of claim 18.

In response, the Applicants have rewritten claim 18 to remove the repeated phrase noted by the Examiner. The Applicants have also rewritten claim 18 to provide clear antecedent basis for the phrase “attachment flange” on line 2 of claim 18, as amended.

The Applicants believe that claim 18, as presently claimed, is allowable because it is definite, particularly points out and distinctly claims the subject matter that the Applicants regard as the invention, and has proper antecedent basis. Thus, the Examiner should withdraw this rejection as to claim 18.

Response to the Rejections under 35 U.S.C. § 102

The Examiner rejected claims 8-11, 20-21, and 24-25 as being anticipated by Rose, United States Patent Number 5,698,810 (hereinafter “Rose”). The Examiner rejected claims 8-11 and 25 as being anticipated by Hughes, United States Patent Number 2,206,568 (hereinafter “Hughes”). The Examiner rejected claims 8-11 and 25 as being anticipated by Cave, PCT Published Application Number PCT/US85/01950 (hereinafter “Cave”). The Examiner rejected claims 1-5, 8-11, 13, and 25 as being anticipated by Cellini, PCT Published Application Number PCT/US83/00984 (hereinafter “Cellini”). The Applicants respectfully traverses each of these rejections.

Rejection of Claims 8-11, 20-21, and 24-25 Based on Rose

Anticipation requires that each and every element of the claims must be present in the cited prior art reference. As amended, the claims are not anticipated by the Rose reference.

Rose describes a ballistic optimizing system that improves the single shot accuracy of a firearm. A shooter improves the single shot accuracy by tuning the Rose system to the characteristics and harmonics of the barrel. Independent claims 8, 20, and 25, as presently claimed, describe the limitations of a muzzle stabilizer for a rapid fire repeating firearm to prevent muzzle climb. For this reason alone, the Applicants believe that the Examiner should withdraw this anticipation rejection based on Rose as to independent claims 8, 20, and 25.

Rose also describes the vents (elements 32, 34, and 36) as “extending radially outward from a common point on the central, longitudinal axis of the main body portion”. Independent claims 8, 20, and 25, as presently claimed, describe a plurality of gas vents where a first gas vent, nearest to a first end of the tubular body, has an angle that is perpendicular to a longitudinal axis of the tubular body, and a second gas vent, nearest to a second end of the tubular body, has an

angle that is non-parallel to the angle of the first gas vent. Since all of the gas vents disclosed in Rose are parallel, the Applicants believe that the Examiner should withdraw this anticipation rejection based on Rose as to independent claims 8, 20, and 25.

Claims 9-11, 21, and 24 depend from either independent claim 8, 20, or 25. For the previously stated reasons, independent claims 8, 20, and 25 are allowable. Since any claim that depends from an allowable independent claim is also allowable, the Applicants believe that the Examiner should also withdraw this anticipation rejection based on Rose as to dependent claims 9-11, 21, and 24.

Rejection of Claims 8-11 and 25 Based on Hughes

Anticipation requires that each and every element of the claims must be present in the cited prior art reference. As amended, the claims are not anticipated by the Hughes reference.

Hughes describes a device for controlling recoil in guns. A bullet discharged from a gun employing the Hughes device creates a recoil force in the opposite direction of the bullet path. The Hughes device employs discharge vents angled in the direction of the recoil force to counteract and reduce the recoil force. Independent claims 8 and 25, as presently claimed, describe the limitations of a muzzle stabilizer for a rapid fire repeating firearm to prevent muzzle climb. Since the Hughes device does not stabilize the muzzle to prevent muzzle climb, the Applicants believe that the Examiner should withdraw this anticipation rejection based on Hughes as to independent claims 8 and 25.

Hughes also describes the vents (elements 15 and 25) as extending “rearwardly and outwardly” from the forward part of the device and are “arranged in a circular series in groups of three”. Independent claims 8 and 25, as presently claimed, describe a plurality of gas vents where a first gas vent, nearest to a first end of the tubular body, has an angle that is perpendicular

to a longitudinal axis of the tubular body, and a second gas vent, nearest to a second end of the tubular body, has an angle that is non-parallel to the angle of the first gas vent. Since all of the gas vents disclosed in Hughes are parallel, the Applicants believe that the Examiner should withdraw this anticipation rejection based on Hughes as to independent claims 8 and 25.

Claims 9-11 depend from independent claim 8. For the previously stated reasons, independent claim 8 is allowable. Since any claim that depends from an allowable independent claim is also allowable, the Applicants believe that the Examiner should also withdraw this anticipation rejection based on Hughes as to dependent claims 9-11.

Rejection of Claims 8-11 and 25 Based on Cave

Anticipation requires that each and every element of the claims must be present in the cited prior art reference. As amended, the claims are not anticipated by the Cave reference.

Cave describes a muzzle brake for a gun that controls spent gases that exit from the muzzle during discharge of a bullet. During a discussion of the prior art, Cave describes various well known methods for controlling recoil in “pistols or small arms”. Independent claims 8 and 25, as presently claimed, describe the limitations of a muzzle stabilizer for a rapid fire repeating firearm to prevent muzzle climb. For this reason alone, the Applicants believe that the Examiner should withdraw this anticipation rejection based on Cave as to independent claims 8 and 25.

Cave also describes the muzzle brake as having two sets of vents. The vents in the first set are nearest the muzzle and are angled, relative to the longitudinal axis of the gun barrel, at 70 to 75 degrees away from the shooter. The vents in the second set (farthest from the muzzle) are orthogonal to the longitudinal axis of the gun barrel. Independent claims 8 and 25, as presently claimed, describe a plurality of gas vents where a first gas vent, nearest to a first end of the tubular body, has an angle that is perpendicular to a longitudinal axis of the tubular body, and a

second gas vent, nearest to a second end of the tubular body, has an angle that is non-parallel to the angle of the first gas vent. For this reason alone, the Applicants believe that the Examiner should withdraw this anticipation rejection based on Cave as to independent claims 8 and 25.

Claims 9-11 depend from independent claim 8. For the previously stated reasons, independent claim 8 is allowable. Since any claim that depends from an allowable independent claim is also allowable, the Applicants believe that the Examiner should also withdraw this anticipation rejection based on Cave as to dependent claims 9-11.

Rejection of Claims 1-5, 8-11, 13, and 25 Based on Cellini

Anticipation requires that each and every element of the claims must be present in the cited prior art reference. As amended, the claims are not anticipated by the Cellini reference.

Cellini describes a weapon stabilizer and recoil reducer that includes a “plurality of circumferentially spaced apertures or openings … and a pair of slots”, preferentially, “on the top and elongated in a direction substantially parallel to the longitudinal axis of the tubular housing member”. Independent claims 1, 8, and 25, as presently claimed, describe a plurality of gas vents where a first gas vent, nearest to a first end of the tubular body, has an angle that is perpendicular to a longitudinal axis of the tubular body, and a second gas vent, nearest to a second end of the tubular body, has an angle that is non-parallel to the angle of the first gas vent. For this reason, the Applicants believe that the Examiner should withdraw this anticipation rejection based on Cellini as to independent claims 1, 8, and 25.

Claims 4-5, 9-11, and 13 depend from independent claims 1 or 8. For the previously stated reasons, independent claims 1 and 8 are allowable. Since any claim that depends from an allowable independent claim is also allowable, the Applicants believe that the Examiner should

also withdraw this anticipation rejection based on Cellini as to dependent claims 4-5, 9-11, and 13.

Response to the Rejections under 35 U.S.C. § 103

The Examiner rejected claims 12, 14-19, and 22-23 as being unpatentable over by Rose in view of Galliot et al., United Kingdom Patent Number 483,793 (hereinafter “Galliot”). The Examiner rejected claims 1-5 and 13 as being unpatentable over Rose in view of Davies, United States Patent Number 6,308,609 (hereinafter “Davies”). The Examiner rejected claims 1-5 and 13 as being unpatentable over Hughes in view of Davies. The Applicants respectfully traverses each of these rejections.

Rejection of Claims 12, 14-19, and 22-23 Based on Rose in View of Galliot

A *prima facie* case of obviousness requires a prior art reference or combination of references to meet three criteria. First there must be some suggestion or motivation, either in the cited reference or in the knowledge of one skilled in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference or combination of references must teach or suggest all the claim limitations. The Rose and Galliot references, taken either alone or in combination, do not teach or suggest the claims as amended.

For the reasons stated in the previous section titled “Response to the Rejections under 35 U.S.C. § 102”, Rose alone does not teach or suggest all of the limitations of independent claims 8, 20, and 25. Since independent claim 14, as presently claimed, includes similar limitations to those noted in independent claims 8, 20, and 25, Rose alone also does not teach or suggest all of the limitations of independent claim 14.

Galliot describes an improvement to a recoil absorber for firearms. The Examiner relies on the disclosure in Galliot for the teaching of a muzzle stabilizer with graduated size openings. Galliot does not make up for the shortcomings of Rose by describing, as presently claimed in independent claims 8, 14, and 20, a plurality of gas vents where a first gas vent, nearest to a first end of the tubular body, has an angle that is perpendicular to a longitudinal axis of the tubular body, and a second gas vent, nearest to a second end of the tubular body, has an angle that is non-parallel to the angle of the first gas vent. For this reason, the Applicants believe that the Examiner should withdraw this obviousness rejection because Rose and Galliot, taken alone or in combination, do not render obvious the presently claimed invention in independent claims 8, 14, and 20.

Claims 12, 15-19, and 22-23 depend from independent claim 8, 14, and 20, respectively. For the previously stated reasons, independent claims 8, 14, and 20 are allowable. Since any claim that depends from an allowable independent claim is also allowable, the Applicants believe that the Examiner should also withdraw this obviousness rejection because Rose and Galliot, taken alone or in combination, do not render obvious the presently claimed invention in dependent claims 12, 15-19, and 22-23.

Rejection of Claims 1-5 and 13 Based on Rose in View of Davies

A *prima facie* case of obviousness requires a prior art reference or combination of references to meet three criteria. First there must be some suggestion or motivation, either in the cited reference or in the knowledge of one skilled in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference or combination of references must teach or suggest all the claim

limitations. The Rose and Davies references, taken either alone or in combination, do not teach or suggest the claims as amended.

For the reasons stated in the previous section titled “Response to the Rejections under 35 U.S.C. § 102”, Rose alone does not teach or suggest all of the limitations of independent claims 8, 20, and 25. Since independent claim 1, as presently claimed, includes similar limitations to those noted in independent claims 8, 20, and 25, Rose alone also does not teach or suggest all of the limitations of independent claim 1.

Davies describes an apparatus for reducing muzzle blast upon discharge of one or more projectiles from a gun. The Examiner relies on the disclosure in Davies for the teaching of a thread pattern for attaching muzzle elements of at least 24 threads per inch. Davies does not make up for the shortcomings of Rose by describing, as presently claimed in independent claims 1 and 8, a plurality of gas vents where a first gas vent, nearest to a first end of the tubular body, has an angle that is perpendicular to a longitudinal axis of the tubular body, and a second gas vent, nearest to a second end of the tubular body, has an angle that is non-parallel to the angle of the first gas vent. For this reason, the Applicants believe that the Examiner should withdraw this obviousness rejection because Rose and Davies, taken alone or in combination, do not render obvious the presently claimed invention in independent claims 1 and 8.

Claims 2-5 and 13 depend from either independent claim 1 or 8. For the previously stated reasons, independent claims 1 and 8 are allowable. Since any claim that depends from an allowable independent claim is also allowable, the Applicants believe that the Examiner should also withdraw this obviousness rejection because Rose and Davies, taken alone or in combination, do not render obvious the presently claimed invention in dependent claims 2-5 and 13.

Rejection of Claims 1-5 and 13 Based on Hughes in View of Davies

A *prima facie* case of obviousness requires a prior art reference or combination of references to meet three criteria. First there must be some suggestion or motivation, either in the cited reference or in the knowledge of one skilled in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference or combination of references must teach or suggest all the claim limitations. The Hughes and Davies references, taken either alone or in combination, do not teach or suggest the claims as amended.

For the reasons stated in the previous section titled “Response to the Rejections under 35 U.S.C. § 102”, Hughes alone does not teach or suggest all of the limitations of independent claims 8 and 25. Since independent claim 1, as presently claimed, includes similar limitations to those noted in independent claims 8 and 25, Hughes alone also does not teach or suggest all of the limitations of independent claim 1.

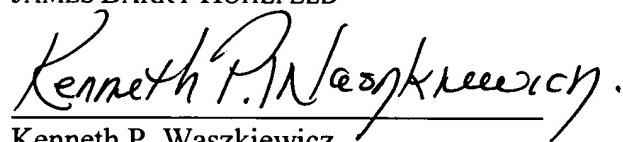
Davies describes an apparatus for reducing muzzle blast upon discharge of one or more projectiles from a gun. The Examiner relies on the disclosure in Davies for the teaching of a thread pattern for attaching muzzle elements of at least 24 threads per inch. Davies does not make up for the shortcomings of Hughes by describing, as presently claimed in independent claims 1 and 8, a plurality of gas vents where a first gas vent, nearest to a first end of the tubular body, has an angle that is perpendicular to a longitudinal axis of the tubular body, and a second gas vent, nearest to a second end of the tubular body, has an angle that is non-parallel to the angle of the first gas vent. For this reason, the Applicants believe that the Examiner should withdraw this obviousness rejection because Hughes and Davies, taken alone or in combination, do not render obvious the presently claimed invention in independent claims 1 and 8.

Claims 2-5 and 13 depend from either independent claim 1 or 8. For the previously stated reasons, independent claims 1 and 8 are allowable. Since any claim that depends from an allowable independent claim is also allowable, the Applicants believe that the Examiner should also withdraw this obviousness rejection because Hughes and Davies, taken alone or in combination, do not render obvious the presently claimed invention in dependent claims 2-5 and 13.

AUTHORIZATION

The undersigned hereby authorizes the Commissioner to charge all required fees, fees under 37 C.F.R. §§ 1.16 and 1.17, or all required extension of time fees for this paper to Deposit Account Number 50-0573.

Respectfully submitted,
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